IFW

Electronic Filing System (EFS) Data

Electronic Patent Application Submission

USPTO Use Only

EFS ID:	49668
Application ID:	09743818
Title of Invention:	Protease Susceptibility II
First Named Inventor:	Anthony Weiss
Domestic/Foreign Application:	Domestic Application
Filing Date:	2001-04-26
Effective Receipt Date:	2003-10-23
Submission Type:	BIO Sequence Filing
Filing Type:	
Confirmation number:	8602
Attorney Docket Number:	GHC11USA

Total Fees Authorized:

Digital Certificate Holder: cn=Cathy A. Kodroff,ou=Registered Attorneys,ou=Patent and Trademark Office,ou=Department of Commerce,o=U.S. Government,c=US
Certificate Message Digest: 79a77c537824f533a91104403ee220ce9152bff7

TRANSMITTAL

Electronic Version v1.1
Stylesheet Version v1.1.0

Title of Invention	Protease Susceptibility II

Application Number: 09/743818
Date: 2001-04-26
First Named Applicant: Anthony S. Weiss

Confirmation Number: 8602
Attorney Docket Number: GHC11USA

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I, the undersigned, certify that I have viewed a display of document(s) being electronically submitted to the United States Patent and Trademark Office, using either the USPTO provided style sheet or software, and that this is the document(s) I intend for initiation or further prosecution of a patent application noted in the submission. This document(s) will become part of the official electronic record at the USPTO.

Submitted by:	Elec. Sign.	Sign. Capacity
Cathy A. Kodroff Registered Number: 33,980	/cathyakodroff/	Attorney

Documents being submitted	Files
us-bio-seq-trans	GHC11USA-usbios.xml
	us-bio-seq-trans.dtd
	us-bio-seq-trans.xsl
sequence-listing	sequence.txt

Comments

AMINO ACID AND/OR NUCLEOTIDE SEQUENCE LISTING SUBMISSION

Electronic Version v13
Stylesheet Version v01

This is a request for filing the electronic Computer Readable Form copy of a sequence listing via the Electronic Filing System for a patent application under 37 CFR 1.821-1.825 instead of via one of the physical media specified in 37 CFR 1.824(c).

This communication has an attached file which is an electronic copy of the amino acid and/or nucleotide sequence listing for the previously mentioned United States patent application.

The electronic copy submitted herewith is the Computer Readable Form (CRF), as required by 1.821(e).

Any applicable fees associated with the filing of the electronic copy have been paid.

This submission does not go beyond the disclosure of the application as originally filed (i.e., contains no new matter). It may be in addition to an original CRF, filed to comply with the sequence rules.

This submission in electronic form comprises only the CRF of 37 CFR 1.821(e). I acknowledge that I am responsible for all additional requirements of amino acid and/or nucleotide sequence listing submissions as specified in 37 CFR 1.821 - 1.825.

This submission does not go beyond the disclosure of the application as originally filed (i.e., contains no new matter), and/or is in addition to an original CRF filed to comply with the sequence rules. If not made to comply with an originally filed CRF, it is identical to the sequences disclosed in the application as originally filed and/or the paper copy of the sequence listing as originally filed.

I hereby certify that this correspondence is being transmitted to the United States Patent and Trademark Office on the following date: 2003-10-23

Name: Cathy A. Kodroff
Electronic Signature Mark: /CathyAKodroff/

Attachment description:	Attached is a Substitute Sequence Listing. The hard copy and an appropriate extension of time is being supplied with a response to an Office Action dated 08/25/2003.
Compression	

software used:

SEQUENCE LISTING

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Gly Gly Val Pro Gly Ala Ile Pro Gly Gly Val Pro Gly Gly Val Phe
1               5                   10                  15

Tyr Pro Gly Ala Gly Leu Gly Ala Leu Gly Gly Gly Ala Leu Gly Pro
            20                  25                  30

Gly Gly Lys Pro Leu Lys Pro Val Pro Gly Gly Leu Ala Gly Ala Gly
        35                  40                  45

Leu Gly Ala Gly Leu Gly Ala Phe Pro Ala Val Thr Phe Pro Gly Ala
    50                  55                  60

Leu Val Pro Gly Gly Val Ala Asp Ala Ala Ala Ala Tyr Lys Ala Ala
65                  70                  75                  80

Lys Ala Gly Ala Gly Leu Gly Gly Val Pro Gly Val Gly Gly Leu Gly
                85                  90                  95

Val Ser Ala Gly Ala Val Val Pro Gln Pro Gly Ala Gly Val Lys Pro
            100                 105                 110

Gly Lys Val Pro Gly Val Gly Leu Pro Gly Val Tyr Pro Gly Gly Val
        115                 120                 125
```

```
Leu Pro Gly Ala Arg Phe Pro Gly Val Gly Val Leu Pro Gly Val Pro
    130                 135                 140

Thr Gly Ala Gly Val Lys Pro Lys Ala Pro Gly Val Gly Gly Ala Phe
145                 150                 155                 160

Ala Gly Ile Pro Gly Val Gly Pro Phe Gly Gly Pro Gln Pro Gly Val
                165                 170                 175

Pro Leu Gly Tyr Pro Ile Lys Ala Pro Lys Leu Pro Gly Gly Tyr Gly
            180                 185                 190

Leu Pro Tyr Thr Thr Gly Lys Leu Pro Tyr Gly Tyr Gly Pro Gly Gly
        195                 200                 205

Val Ala Gly Ala Ala Gly Lys Ala Gly Tyr Pro Thr Gly Thr Gly Val
    210                 215                 220

Gly Pro Gln Ala Ala Ala Ala Ala Ala Ala Lys Ala Ala Ala Lys Phe
225                 230                 235                 240

Gly Ala Gly Ala Ala Gly Val Leu Pro Gly Val Gly Gly Ala Gly Val
                245                 250                 255

Pro Gly Val Pro Gly Ala Ile Pro Gly Ile Gly Gly Ile Ala Gly Val
            260                 265                 270

Gly Thr Pro Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Lys Ala Ala
        275                 280                 285

Lys Tyr Gly Ala Ala Ala Gly Leu Val Pro Gly Gly Pro Gly Phe Gly
    290                 295                 300

Pro Gly Val Val Gly Val Pro Gly Ala Gly Val Pro Gly Val Gly Val
305                 310                 315                 320

Pro Gly Ala Gly Ile Pro Val Val Pro Gly Ala Gly Ile Pro Gly Ala
                325                 330                 335

Ala Val Pro Gly Val Val Ser Pro Glu Ala Ala Ala Lys Ala Ala Ala
            340                 345                 350

Lys Ala Ala Lys Tyr Gly Ala Arg Pro Gly Val Gly Val Gly Gly Ile
        355                 360                 365
```

```
Pro Thr Tyr Gly Val Gly Ala Gly Gly Phe Pro Gly Phe Gly Val Gly
    370                 375                 380

Val Gly Gly Ile Pro Gly Val Ala Gly Val Pro Ser Val Gly Gly Val
385                 390                 395                 400

Pro Gly Val Gly Gly Val Pro Gly Val Gly Ile Ser Pro Glu Ala Gln
                405                 410                 415

Ala Ala Ala Ala Ala Lys Ala Ala Lys Tyr Gly Val Gly Thr Pro Ala
            420                 425                 430

Ala Ala Ala Ala Lys Ala Ala Ala Lys Ala Ala Gln Phe Gly Leu Val
        435                 440                 445

Pro Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly
    450                 455                 460

Val Ala Pro Gly Val Gly Leu Ala Pro Gly Val Gly Val Ala Pro Gly
465                 470                 475                 480

Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Ile Gly Pro Gly
                485                 490                 495

Gly Val Ala Ala Ala Ala Lys Ser Ala Ala Lys Val Ala Ala Lys Ala
            500                 505                 510

Gln Leu Arg Ala Ala Ala Gly Leu Gly Ala Gly Ile Pro Gly Leu Gly
        515                 520                 525

Val Gly Val Gly Val Pro Gly Leu Gly Val Gly Ala Gly Val Pro Gly
    530                 535                 540

Leu Gly Val Gly Ala Gly Val Pro Gly Phe Gly Ala Val Pro Gly Ala
545                 550                 555                 560

Leu Ala Ala Ala Lys Ala Ala Lys Tyr Gly Ala Ala Val Pro Gly Val
                565                 570                 575

Leu Gly Gly Leu Gly Ala Leu Gly Gly Val Gly Ile Pro Gly Gly Val
            580                 585                 590

Val Gly Ala Gly Pro Ala Ala Ala Ala Ala Ala Ala Lys Ala Ala Ala
        595                 600                 605
```

```
Lys Ala Ala Gln Phe Gly Leu Val Gly Ala Ala Gly Leu Gly Gly Leu
    610                 615                 620

Gly Val Gly Gly Leu Gly Val Pro Gly Val Gly Gly Leu Gly Gly Ile
625                 630                 635                 640

Pro Pro Ala Ala Ala Ala Lys Ala Ala Lys Tyr Gly Ala Ala Gly Leu
                645                 650                 655

Gly Gly Val Leu Gly Gly Ala Gly Gln Phe Pro Leu Gly Gly Val Ala
            660                 665                 670

Ala Arg Pro Gly Phe Gly Leu Ser Pro Ile Phe Pro Gly Gly Ala Cys
        675                 680                 685

Leu Gly Lys Ala Cys Gly Arg Lys Arg Lys
    690                 695
```

<210> 6
<211> 661
<212> PRT
<213> Homo sapiens

<400> 6

```
Met Gly Gly Val Pro Gly Ala Val Pro Gly Gly Val Pro Gly Gly Val
1               5                   10                  15

Phe Tyr Pro Gly Ala Gly Phe Gly Ala Val Pro Gly Gly Val Ala Asp
            20                  25                  30

Ala Ala Ala Ala Tyr Lys Ala Ala Lys Ala Gly Ala Gly Leu Gly Gly
        35                  40                  45

Val Pro Gly Val Gly Gly Leu Gly Val Ser Ala Gly Ala Val Val Pro
    50                  55                  60

Gln Pro Gly Ala Gly Val Lys Pro Gly Lys Val Pro Gly Val Gly Leu
65                  70                  75                  80

Pro Gly Val Tyr Pro Gly Phe Gly Ala Val Pro Gly Ala Arg Phe Pro
                85                  90                  95

Gly Val Gly Val Leu Pro Gly Val Pro Thr Gly Ala Gly Val Lys Pro
            100                 105                 110
```

```
Lys Ala Pro Gly Val Gly Gly Ala Phe Ala Gly Ile Pro Gly Val Gly
        115                 120                 125

Pro Phe Gly Gly Pro Gln Pro Gly Val Pro Leu Gly Tyr Pro Ile Lys
    130                 135                 140

Ala Pro Lys Leu Pro Gly Gly Tyr Gly Leu Pro Tyr Thr Thr Gly Lys
145                 150                 155                 160

Leu Pro Tyr Gly Tyr Gly Pro Gly Gly Val Ala Gly Ala Ala Gly Lys
                165                 170                 175

Ala Gly Tyr Pro Thr Gly Thr Gly Val Gly Pro Gln Ala Ala Ala Ala
            180                 185                 190

Ala Ala Ala Lys Ala Ala Ala Lys Phe Gly Ala Gly Ala Ala Gly Phe
        195                 200                 205

Gly Ala Val Pro Gly Val Gly Gly Ala Gly Val Pro Gly Val Pro Gly
    210                 215                 220

Ala Ile Pro Gly Ile Gly Gly Ile Ala Gly Val Gly Thr Pro Ala Ala
225                 230                 235                 240

Ala Ala Ala Ala Ala Ala Ala Ala Lys Ala Ala Lys Tyr Gly Ala Ala
                245                 250                 255

Ala Gly Leu Val Pro Gly Gly Pro Gly Phe Gly Pro Gly Val Val Gly
            260                 265                 270

Val Pro Gly Phe Gly Ala Val Pro Gly Val Gly Val Pro Gly Ala Gly
        275                 280                 285

Ile Pro Val Val Pro Gly Ala Gly Ile Pro Gly Ala Ala Gly Phe Gly
    290                 295                 300

Ala Val Ser Pro Glu Ala Ala Ala Lys Ala Ala Ala Lys Ala Ala Lys
305                 310                 315                 320

Tyr Gly Ala Arg Pro Gly Val Gly Val Gly Gly Ile Pro Thr Tyr Gly
                325                 330                 335

Val Gly Ala Gly Gly Phe Pro Gly Phe Gly Val Gly Val Gly Gly Ile
            340                 345                 350
```

```
Pro Gly Val Ala Gly Val Pro Ser Val Gly Gly Val Pro Gly Val Gly
        355                 360                 365

Gly Val Pro Gly Val Gly Ile Ser Pro Glu Ala Gln Ala Ala Ala Ala
    370                 375                 380

Ala Lys Ala Ala Lys Tyr Gly Val Gly Thr Pro Ala Ala Ala Ala Ala
385                 390                 395                 400

Lys Ala Ala Ala Lys Ala Ala Gln Phe Gly Leu Val Pro Gly Val Gly
                405                 410                 415

Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly
            420                 425                 430

Val Gly Leu Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Val Ala
        435                 440                 445

Pro Gly Val Gly Val Ala Pro Gly Ile Gly Pro Gly Gly Val Ala Ala
    450                 455                 460

Ala Ala Lys Ser Ala Ala Lys Val Ala Ala Lys Ala Gln Leu Arg Ala
465                 470                 475                 480

Ala Ala Gly Leu Gly Ala Gly Ile Pro Gly Leu Gly Val Gly Val Gly
                485                 490                 495

Val Pro Gly Leu Gly Val Gly Ala Gly Val Pro Gly Leu Gly Val Gly
            500                 505                 510

Ala Gly Val Pro Gly Phe Gly Ala Val Pro Gly Ala Leu Ala Ala Ala
        515                 520                 525

Lys Ala Ala Lys Tyr Gly Ala Val Pro Gly Val Leu Gly Gly Leu Gly
    530                 535                 540

Ala Leu Gly Gly Val Gly Ile Pro Gly Gly Val Val Gly Ala Gly Pro
545                 550                 555                 560

Ala Ala Ala Ala Ala Ala Ala Lys Ala Ala Ala Lys Ala Ala Gln Phe
                565                 570                 575

Gly Leu Val Gly Ala Ala Gly Leu Gly Gly Leu Gly Val Gly Gly Leu
            580                 585                 590
```

Gly Val Pro Gly Val Gly Gly Leu Gly Gly Ile Pro Pro Ala Ala Ala
595 600 605

Ala Lys Ala Ala Lys Tyr Gly Ala Ala Gly Leu Gly Gly Val Leu Gly
610 615 620

Gly Ala Gly Gln Phe Pro Leu Gly Gly Val Ala Ala Arg Pro Gly Phe
625 630 635 640

Gly Leu Ser Pro Ile Phe Pro Gly Gly Ala Cys Leu Gly Lys Ala Cys
645 650 655

Gly Arg Lys Arg Lys
660

<210> 7
<211> 571
<212> PRT
<213> Homo sapiens

<400> 7

Gly Gly Val Pro Gly Ala Ile Pro Gly Gly Val Pro Gly Gly Val Phe
1 5 10 15

Tyr Pro Gly Ala Gly Leu Gly Ala Leu Gly Gly Gly Ala Leu Gly Pro
20 25 30

Gly Gly Lys Pro Leu Lys Pro Val Pro Gly Gly Leu Ala Gly Ala Gly
35 40 45

Leu Gly Ala Gly Leu Gly Ala Phe Pro Ala Val Thr Phe Pro Gly Ala
50 55 60

Leu Val Pro Gly Gly Val Ala Asp Ala Ala Ala Ala Tyr Lys Ala Ala
65 70 75 80

Lys Ala Gly Ala Gly Leu Gly Gly Val Pro Gly Val Gly Gly Leu Gly
85 90 95

Val Ser Ala Gly Ala Val Val Pro Gln Pro Gly Ala Gly Val Lys Pro
100 105 110

Gly Lys Val Pro Gly Val Gly Leu Pro Gly Val Tyr Pro Gly Gly Val
115 120 125

Leu Pro Gly Ala Arg Phe Pro Gly Val Gly Val Leu Pro Gly Val Pro

```
    130                 135                 140

Thr Gly Ala Gly Val Lys Pro Lys Ala Pro Gly Val Gly Gly Ala Phe
145                 150                 155                 160

Ala Gly Ile Pro Gly Val Gly Pro Phe Gly Gly Pro Gln Pro Gly Val
                165                 170                 175

Pro Leu Gly Tyr Pro Ile Lys Ala Pro Lys Leu Pro Gly Gly Tyr Gly
            180                 185                 190

Leu Pro Tyr Thr Thr Gly Lys Leu Pro Tyr Gly Tyr Gly Pro Gly Gly
        195                 200                 205

Val Ala Gly Ala Ala Gly Lys Ala Gly Tyr Pro Thr Gly Thr Gly Val
    210                 215                 220

Gly Pro Gln Ala Ala Ala Ala Ala Ala Ala Lys Ala Ala Ala Lys Phe
225                 230                 235                 240

Gly Ala Gly Ala Ala Gly Val Leu Pro Gly Val Gly Gly Ala Gly Val
                245                 250                 255

Pro Gly Val Pro Gly Ala Ile Pro Gly Ile Gly Gly Ile Ala Gly Val
            260                 265                 270

Gly Thr Pro Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Lys Ala Ala
        275                 280                 285

Lys Tyr Gly Ala Ala Ala Gly Leu Val Pro Gly Gly Pro Gly Phe Gly
    290                 295                 300

Pro Gly Val Val Gly Val Pro Gly Ala Gly Val Pro Gly Val Gly Val
305                 310                 315                 320

Pro Gly Ala Gly Ile Pro Val Val Pro Gly Ala Gly Ile Pro Gly Ala
                325                 330                 335

Ala Val Pro Gly Val Val Ser Pro Glu Ala Ala Ala Lys Ala Ala Ala
            340                 345                 350

Lys Ala Ala Lys Tyr Gly Ala Arg Pro Gly Val Gly Val Gly Gly Ile
        355                 360                 365

Pro Thr Tyr Gly Val Gly Ala Gly Gly Phe Pro Gly Phe Gly Val Gly
```

```
    370                 375                 380

Val Gly Gly Ile Pro Gly Val Ala Gly Val Pro Ser Val Gly Gly Val
385                 390                 395                 400

Pro Gly Val Gly Gly Val Pro Gly Val Gly Ile Ser Pro Glu Ala Gln
                405                 410                 415

Ala Ala Ala Ala Ala Lys Ala Ala Lys Tyr Gly Val Gly Thr Pro Ala
            420                 425                 430

Ala Ala Ala Ala Lys Ala Ala Ala Lys Ala Ala Gln Phe Gly Leu Val
        435                 440                 445

Pro Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly
    450                 455                 460

Val Ala Pro Gly Val Gly Leu Ala Pro Gly Val Gly Val Ala Pro Gly
465                 470                 475                 480

Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Ile Gly Pro Gly
                485                 490                 495

Gly Val Ala Ala Ala Ala Lys Ser Ala Ala Lys Val Ala Ala Lys Ala
            500                 505                 510

Gln Leu Arg Ala Ala Ala Gly Leu Gly Ala Gly Ile Pro Gly Leu Gly
        515                 520                 525

Val Gly Val Gly Val Pro Gly Leu Gly Val Gly Ala Gly Val Pro Gly
    530                 535                 540

Leu Gly Val Gly Ala Gly Cys Ser Gly Phe Arg Cys Trp Arg Gly Arg
545                 550                 555                 560

Arg Cys Thr Ser Phe Pro Val Ser Arg Thr Ala
                565                 570


<210>  8
<211>  9
<212>  PRT
<213>  Homo sapiens

<400>  8

Lys Ala Pro Gly Val Gly Gly Ala Phe
1               5
```

<210> 9
<211> 7
<212> PRT
<213> Homo sapiens

<400> 9

Arg Ala Ala Ala Gly Leu Gly
1 5

<210> 10
<211> 11
<212> PRT
<213> Homo sapiens

<400> 10

Arg Ser Leu Ser Pro Glu Leu Arg Glu Gly Asp
1 5 10

<210> 11
<211> 9
<212> PRT
<213> Homo sapiens

<400> 11

Lys Ala Ala Lys Ala Gly Ala Gly Leu
1 5

<210> 12
<211> 9
<212> PRT
<213> Homo sapiens

<400> 12

Lys Ala Gly Ala Gly Leu Gly Gly Val
1 5

<210> 13
<211> 13
<212> PRT
<213> Homo sapiens

<400> 13

Ala Leu Ala Ala Ala Lys Ala Ala Lys Tyr Gly Ala Ala
1 5 10

<210> 14
<211> 11
<212> PRT

<213> Homo sapiens

<400> 14

Lys Ala Ala Gln Phe Gly Leu Val Pro Gly Val
1 5 10

<210> 15
<211> 11
<212> PRT
<213> Homo sapiens

<400> 15

Lys Ser Ala Ala Lys Val Ala Ala Lys Ala Gln
1 5 10

<210> 16
<211> 9
<212> PRT
<213> Homo sapiens

<400> 16

Arg Ser Leu Ser Pro Glu Leu Arg Glu
1 5

<210> 17
<211> 8
<212> PRT
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<400> 17

Gly Gln Leu Arg Ala Ala Ala Gly
1 5

<210> 18
<211> 8
<212> PRT
<213> Homo sapiens

<400> 18

Val Gln Leu Arg Ala Ala Ala Gly
1 5

<210> 19
<211> 8
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<213> Homo sapiens

<400> 19

Ile Gln Leu Arg Ala Ala Ala Gly

1 5

<210> 20
<211> 8
<212> PRT
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<400> 20

Leu Gln Leu Arg Ala Ala Ala Gly
1 5

<210> 21
<211> 8
<212> PRT
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<400> 21

Ala Asn Leu Arg Ala Ala Ala Gly
1 5

<210> 22
<211> 8
<212> PRT
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<400> 22

Ala Gly Leu Arg Ala Ala Ala Gly
1 5

<210> 23
<211> 8
<212> PRT
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<400> 23

Ala Val Leu Arg Ala Ala Ala Gly
1 5

<210> 24
<211> 8
<212> PRT
<213> Homo sapiens

<400> 24

Ala Ser Leu Arg Ala Ala Ala Gly
1 5

<210> 25
<211> 8

<212> PRT
<213> Homo sapiens

<400> 25

Ala Gln Gly Arg Ala Ala Ala Gly
1 5

<210> 26
<211> 8
<212> PRT
<213> Homo sapiens

<400> 26

Ala Gln Val Arg Ala Ala Ala Gly
1 5

<210> 27
<211> 8
<212> PRT
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<400> 27

Ala Gln Ile Arg Ala Ala Ala Gly
1 5

<210> 28
<211> 8
<212> PRT
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<400> 28

Ala Gln Ala Arg Ala Ala Ala Gly
1 5

<210> 29
<211> 8
<212> PRT
<213> Homo sapiens

<400> 29

Ala Gln Leu Arg Gly Ala Ala Gly
1 5

<210> 30
<211> 8
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<213> Homo sapiens

<400> 30

Ala Gln Leu Arg Val Ala Ala Gly
1 5

<210> 31
<211> 8
<212> PRT
<213> Homo sapiens

<400> 31

Ala Gln Leu Arg Ile Ala Ala Gly
1 5

<210> 32
<211> 8
<212> PRT
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<400> 32

Ala Gln Leu Arg Leu Ala Ala Gly
1 5

<210> 33
<211> 8
<212> PRT
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<400> 33

Ala Gln Leu Arg Ala Gly Ala Gly
1 5

<210> 34
<211> 8
<212> PRT
<213> Homo sapiens

<400> 34

Ala Gln Leu Arg Ala Val Ala Gly
1 5

<210> 35
<211> 8
<212> PRT
<213> Homo sapiens

<400> 35

Ala Gln Leu Arg Ala Ile Ala Gly
1 5

<210> 36

<211> 8
<212> PRT
<213> Homo sapiens

<400> 36

Ala Gln Leu Arg Ala Leu Ala Gly
1 5

<210> 37
<211> 8
<212> PRT
<213> Homo sapiens

<400> 37

Ala Gln Leu Arg Ala Ala Gly Gly
1 5

<210> 38
<211> 8
<212> PRT
<213> Homo sapiens

<400> 38

Ala Gln Leu Arg Ala Ala Val Gly
1 5

<210> 39
<211> 8
<212> PRT
<213> Homo sapiens

<400> 39

Ala Gln Leu Arg Ala Ala Ile Gly
1 5

<210> 40
<211> 8
<212> PRT
<213> Homo sapiens

<400> 40

Ala Gln Leu Arg Ala Ala Leu Gly
1 5

<210> 41
<211> 8
<212> PRT
<213> Homo sapiens

<400> 41

Ala Gln Leu Arg Ala Ala Ala Ala
1 5

<210> 42
<211> 8
<212> PRT
<213> Homo sapiens

<400> 42

Ala Gln Leu Arg Ala Ala Ala Ile
1 5

<210> 43
<211> 8
<212> PRT
<213> Homo sapiens

<400> 43

Ala Gln Leu Arg Ala Ala Ala Val
1 5

<210> 44
<211> 8
<212> PRT
<213> Homo sapiens

<400> 44

Ala Gln Leu Arg Ala Ala Ala Leu
1 5

<210> 45
<211> 8
<212> PRT
<213> Homo sapiens

<400> 45

Val Gly Gly Ala Leu Ala Ala Ala
1 5

<210> 46
<211> 8
<212> PRT
<213> Homo sapiens

<400> 46

Gly Pro Gly Ala Leu Ala Ala Ala
1 5

<210> 47
<211> 8
<212> PRT
<213> Homo sapiens

<400> 47

Ile Pro Gly Ala Leu Ala Ala Ala
1 5

<210> 48
<211> 8
<212> PRT
<213> Homo sapiens

<400> 48

Leu Pro Gly Ala Leu Ala Ala Ala
1 5

<210> 49
<211> 8
<212> PRT
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<400> 49

Ala Pro Gly Ala Leu Ala Ala Ala
1 5

<210> 50
<211> 8
<212> PRT
<213> Homo sapiens

<400> 50

Val Pro Gly Ala Leu Ala Ala Ala
1 5

<210> 51
<211> 8
<212> PRT
<213> Homo sapiens

<400> 51

Val Pro Ile Ala Leu Ala Ala Ala
1 5

<210> 52
<211> 8
<212> PRT
<213> Homo sapiens

<400> 52

Val Pro Leu Ala Leu Ala Ala Ala
1 5

<210> 53
<211> 8
<212> PRT
<213> Homo sapiens

<400> 53

Val Pro Val Ala Leu Ala Ala Ala
1 5

<210> 54
<211> 8
<212> PRT
<213> Homo sapiens

<400> 54

Val Pro Gly Ala Gly Ala Ala Ala
1 5

<210> 55
<211> 8
<212> PRT
<213> Homo sapiens

<400> 55

Val Pro Gly Ala Ile Ala Ala Ala
1 5

<210> 56
<211> 8
<212> PRT
<213> Homo sapiens

<400> 56

Val Pro Gly Ala Ala Ala Ala Ala
1 5

<210> 57
<211> 8
<212> PRT
<213> Homo sapiens

<400> 57

Val Pro Gly Ala Val Ala Ala Ala
1 5

<210> 58
<211> 8
<212> PRT
<213> Homo sapiens

<400> 58

Val Pro Gly Ala Leu Gly Ala Ala
1 5

<210> 59
<211> 8
<212> PRT
<213> Homo sapiens

<400> 59

Val Pro Gly Ala Leu Ile Ala Ala
1 5

<210> 60
<211> 8
<212> PRT
<213> Homo sapiens

<400> 60

Val Pro Gly Ala Leu Leu Ala Ala
1 5

<210> 61
<211> 8
<212> PRT
<213> Homo sapiens

<400> 61

Val Pro Gly Ala Leu Val Ala Ala
1 5

<210> 62
<211> 8
<212> PRT
<213> Homo sapiens

<400> 62

Val Pro Gly Ala Leu Ala Gly Ala
1 5

<210> 63
<211> 8
<212> PRT
<213> Homo sapiens

<400> 63

Val Pro Gly Ala Leu Ala Ile Ala
1 5

<210> 64
<211> 8
<212> PRT
<213> Homo sapiens

<400> 64

Val Pro Gly Ala Leu Ala Leu Ala
1 5

<210> 65
<211> 8
<212> PRT
<213> Homo sapiens

<400> 65

Val Pro Gly Ala Leu Ala Val Ala
1 5

<210> 66
<211> 8
<212> PRT
<213> Homo sapiens

<400> 66

Val Pro Gly Ala Leu Ala Ala Ala
1 5

<210> 67
<211> 8
<212> PRT
<213> Homo sapiens

<400> 67

Val Pro Gly Ala Leu Ala Ala Gly
1 5

<210> 68
<211> 8
<212> PRT
<213> Homo sapiens

<400> 68

Val Pro Gly Ala Leu Ala Ala Ile
1 5

<210> 69
<211> 8
<212> PRT
<213> Homo sapiens

<400> 69

Val Pro Gly Ala Leu Ala Ala Leu
1 5

<210> 70
<211> 8
<212> PRT
<213> Homo sapiens

<400> 70

Val Pro Gly Ala Leu Ala Ala Val
1 5

<210> 71
<211> 515
<212> PRT
<213> Homo sapiens

<400> 71

Gly Gly Val Pro Gly Ala Ile Pro Gly Gly Val Pro Gly Gly Val Phe
1 5 10 15

Tyr Pro Gly Ala Gly Leu Gly Ala Leu Gly Gly Gly Ala Leu Gly Pro
20 25 30

Gly Gly Lys Pro Leu Lys Pro Val Pro Gly Gly Leu Ala Gly Ala Gly
35 40 45

Leu Gly Ala Gly Leu Gly Ala Phe Pro Ala Val Thr Phe Pro Gly Ala
50 55 60

Leu Val Pro Gly Gly Val Ala Asp Ala Ala Ala Ala Tyr Lys Ala Ala
65 70 75 80

Lys Ala Gly Ala Gly Leu Gly Gly Val Pro Gly Val Gly Gly Leu Gly
85 90 95

Val Ser Ala Gly Ala Val Val Pro Gln Pro Gly Ala Gly Val Lys Pro
100 105 110

Gly Lys Val Pro Gly Val Gly Leu Pro Gly Val Tyr Pro Gly Gly Val

```
        115                 120                 125

Leu Pro Gly Ala Arg Phe Pro Gly Val Gly Val Leu Pro Gly Val Pro
    130                 135                 140

Thr Gly Ala Gly Val Lys Pro Lys Ala Pro Gly Val Gly Gly Ala Phe
145                 150                 155                 160

Ala Gly Ile Pro Gly Val Gly Pro Phe Gly Gly Pro Gln Pro Gly Val
                165                 170                 175

Pro Leu Gly Tyr Pro Ile Lys Ala Pro Lys Leu Pro Gly Gly Tyr Gly
            180                 185                 190

Leu Pro Tyr Thr Thr Gly Lys Leu Pro Tyr Gly Tyr Gly Pro Gly Gly
        195                 200                 205

Val Ala Gly Ala Ala Gly Lys Ala Gly Tyr Pro Thr Gly Thr Gly Val
    210                 215                 220

Gly Pro Gln Ala Ala Ala Ala Ala Ala Ala Lys Ala Ala Ala Lys Phe
225                 230                 235                 240

Gly Ala Gly Ala Ala Gly Val Leu Pro Gly Val Gly Gly Ala Gly Val
                245                 250                 255

Pro Gly Val Pro Gly Ala Ile Pro Gly Ile Gly Gly Ile Ala Gly Val
            260                 265                 270

Gly Thr Pro Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Lys Ala Ala
        275                 280                 285

Lys Tyr Gly Ala Ala Ala Gly Leu Val Pro Gly Gly Pro Gly Phe Gly
    290                 295                 300

Pro Gly Val Val Gly Val Pro Gly Ala Gly Val Pro Gly Val Gly Val
305                 310                 315                 320

Pro Gly Ala Gly Ile Pro Val Val Pro Gly Ala Gly Ile Pro Gly Ala
                325                 330                 335

Ala Val Pro Gly Val Val Ser Pro Glu Ala Ala Ala Lys Ala Ala Ala
            340                 345                 350

Lys Ala Ala Lys Tyr Gly Ala Arg Pro Gly Val Gly Val Gly Gly Ile
```

```
        355                 360                 365

Pro Thr Tyr Gly Val Gly Ala Gly Gly Phe Pro Gly Phe Gly Val Gly
    370                 375                 380

Val Gly Gly Ile Pro Gly Val Ala Gly Val Pro Ser Val Gly Gly Val
385                 390                 395                 400

Pro Gly Val Gly Gly Val Pro Gly Val Gly Ile Ser Pro Glu Ala Gln
                405                 410                 415

Ala Ala Ala Ala Ala Lys Ala Ala Lys Tyr Gly Val Gly Thr Pro Ala
            420                 425                 430

Ala Ala Ala Ala Lys Ala Ala Ala Lys Ala Ala Gln Phe Gly Leu Val
        435                 440                 445

Pro Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly
    450                 455                 460

Val Ala Pro Gly Val Gly Leu Ala Pro Gly Val Gly Val Ala Pro Gly
465                 470                 475                 480

Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Ile Gly Pro Gly
                485                 490                 495

Gly Val Ala Ala Ala Ala Lys Ser Ala Ala Lys Val Ala Ala Lys Ala
            500                 505                 510

Gln Leu Arg
        515


<210>  72
<211>  49
<212>  PRT
<213>  Homo sapiens

<400>  72

Ala Ala Ala Gly Leu Gly Ala Gly Ile Pro Gly Leu Gly Val Gly Val
1               5                   10                  15

Gly Val Pro Gly Leu Gly Val Gly Ala Gly Val Pro Gly Leu Gly Val
            20                  25                  30

Gly Ala Gly Val Pro Gly Phe Gly Ala Gly Ala Asp Glu Gly Val Arg
        35                  40                  45
```

Arg

<210> 73
<211> 171
<212> PRT
<213> Homo sapiens

<400> 73

```
Gly Val Arg Arg Ser Leu Ser Pro Glu Leu Arg Glu Gly Asp Pro Ser
1               5                   10                  15

Ser Ser Gln His Leu Pro Ser Thr Pro Ser Ser Pro Arg Val Pro Gly
            20                  25                  30

Ala Leu Ala Ala Ala Lys Ala Ala Lys Tyr Gly Ala Ala Val Pro Gly
        35                  40                  45

Val Leu Gly Gly Leu Gly Ala Leu Gly Gly Val Gly Ile Pro Gly Gly
    50                  55                  60

Val Val Gly Ala Gly Pro Ala Ala Ala Ala Ala Ala Ala Lys Ala Ala
65                  70                  75                  80

Ala Lys Ala Ala Gln Phe Gly Leu Val Gly Ala Ala Gly Leu Gly Gly
                85                  90                  95

Leu Gly Val Gly Gly Leu Gly Val Pro Gly Val Gly Gly Leu Gly Gly
            100                 105                 110

Ile Pro Pro Ala Ala Ala Ala Lys Ala Ala Lys Tyr Gly Ala Ala Gly
        115                 120                 125

Leu Gly Gly Val Leu Gly Gly Ala Gly Gln Phe Pro Leu Gly Gly Val
    130                 135                 140

Ala Ala Arg Pro Gly Phe Gly Leu Ser Pro Ile Phe Pro Gly Gly Ala
145                 150                 155                 160

Cys Leu Gly Lys Ala Cys Gly Arg Lys Arg Lys
                165                 170
```

<210> 74
<211> 183
<212> PRT

<213> Homo sapiens

<400> 74

```
Ala Ala Ala Gly Leu Gly Ala Gly Ile Pro Gly Leu Gly Val Gly Val
1               5                   10                  15

Gly Val Pro Gly Leu Gly Val Gly Ala Gly Val Pro Gly Leu Gly Val
            20                  25                  30

Gly Ala Gly Val Pro Gly Phe Gly Ala Val Pro Gly Ala Leu Ala Ala
        35                  40                  45

Ala Lys Ala Ala Lys Tyr Gly Ala Ala Val Pro Gly Val Leu Gly Gly
    50                  55                  60

Leu Gly Ala Leu Gly Gly Val Gly Ile Pro Gly Gly Val Val Gly Ala
65                  70                  75                  80

Gly Pro Ala Ala Ala Ala Ala Ala Ala Lys Ala Ala Ala Lys Ala Ala
                85                  90                  95

Gln Phe Gly Leu Val Gly Ala Ala Gly Leu Gly Gly Leu Gly Val Gly
            100                 105                 110

Gly Leu Gly Val Pro Gly Val Gly Gly Leu Gly Gly Ile Pro Pro Ala
        115                 120                 125

Ala Ala Ala Lys Ala Ala Lys Tyr Gly Ala Ala Gly Leu Gly Gly Val
    130                 135                 140

Leu Gly Gly Ala Gly Gln Phe Pro Leu Gly Gly Val Ala Ala Arg Pro
145                 150                 155                 160

Gly Phe Gly Leu Ser Pro Ile Phe Pro Gly Gly Ala Cys Leu Gly Lys
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Ala Cys Gly Arg Lys Arg Lys
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<210> 75
<211> 18
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<213> bovine tropoelastin

<400> 75

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Val Pro Thr Gly Ala Gly Val Lys Pro Lys Ala Pro Gly Gly Gly Gly
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1 5 10 15

Ala Phe

<210> 76
<211> 17
<212> PRT
<213> mouse tropoelastin

<400> 76

Val Pro Thr Gly Thr Gly Val Lys Ala Lys Ala Pro Gly Gly Gly Ala
1 5 10 15

Phe

<210> 77
<211> 18
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<400> 77

Val Pro Thr Gly Ala Gly Val Lys Pro Lys Ala Gln Val Gly Ala Gly
1 5 10 15

Ala Phe

<210> 78
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<212> PRT
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<400> 78

Val Pro Thr Gly Thr Gly Val Lys Ala Lys Val Pro Gly Gly Gly Gly
1 5 10 15

<210> 79
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Val Pro Thr Gly Thr Gly Ile Lys Ala Lys Gly Pro Gly Ala Gly
1 5 10 15

<210> 80

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Lys Ala Ala Ala Lys Ala Gln Tyr Arg Ala Ala Ala Gly Leu Gly Ala
1 5 10 15

Gly

<210> 81
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Lys Ala Ala Ala Lys Ala Gln Phe Arg Ala Ala Ala Gly Leu Pro Ala
1 5 10 15

Gly

<210> 82
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<213> Artificial

<220>
<223> tropoelastin consensus sequence

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<221> MISC_FEATURE
<222> (9)..(9)
<223> IS AN AROMATIC OR HYDROPHOBIC RESIDUE

<220>
<221> MISC_FEATURE
<222> (16)..(16)
<223> can be either Pro or Gly

<220>
<221> MISC_FEATURE
<222> (19)..(19)
<223> is a hydrophobic residue

<400> 82

Ala Lys Ala Ala Ala Lys Ala Gln Xaa Arg Ala Ala Ala Gly Leu Xaa
1 5 10 15

Ala Gly Xaa Pro

20

<210> 83
<211> 14
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> (7)..(8)
<223> there is a reduced peptide bond between Arg and Ala

<400> 83

Ala Ala Lys Ala Gln Leu Arg Ala Ala Ala Gly Leu Gly Ala
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<210> 84
<211> 14
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<220>
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<223> there is a reduced peptide bond between Ala and Arg

<400> 84

Ala Gly Leu Gly Ala Ala Ala Arg Leu Gln Ala Lys Ala Ala
1 5 10

<210> 85
<211> 14
<212> PRT
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<400> 85

Ala Gly Leu Gly Ala Ala Ala Arg Leu Gln Ala Lys Ala Ala
1 5 10

<210> 86
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> (4)..(5)
<223> there is a reduced peptide bond between Ala and Leu

<400> 86

Val Pro Gly Ala Leu Ala Ala Ala
1 5

<210> 87
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> (4)..(5)
<223> there is a reduced peptide bond between Leu and Ala

<400> 87

Ala Ala Ala Leu Ala Gly Pro Val
1 5

<210> 88
<211> 8
<212> PRT
<213> Homo sapiens

<400> 88

Ala Ala Ala Leu Ala Gly Pro Val
1 5

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<210> 90
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<220>
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<400> 91
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<400> 96
gggtgttggc gttgcaccag 20

<210> 97
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<220>
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<400> 97
tgcacctaca acaccgcccg 20

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<210> 99
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<400> 99
gccaactcag cttcctttcg 20

<210> 100
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<220>
<223> primer

<400> 100
taatacgact cactataggg 20

<210> 101
<211> 15
<212> PRT

<213> Homo sapiens

<400> 101

Val Val Gly Ser Pro Ser Ala Gln Asp Glu Ala Ser Pro Leu Ser
1 5 10 15

<210> 102
<211> 10
<212> PRT
<213> Homo sapiens

<400> 102

Lys Ala Ala Ala Lys Ala Gly Ala Gly Leu
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<210> 103
<211> 12
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<213> Homo sapiens

<400> 103

Ala Leu Ala Ala Lys Ala Ala Lys Tyr Gly Ala Ala
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<210> 104
<211> 11
<212> PRT
<213> Homo sapiens

<400> 104

Lys Ala Ala Gln Phe Gly Leu Val Pro Gly Val
1 5 10

<210> 105
<211> 18
<212> PRT
<213> Homo sapiens

<400> 105

Gly Gly Val Pro Gly Ala Ile Pro Gly Gly Val Pro Gly Gly Phe Tyr
1 5 10 15

Pro Gly